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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,311	05/11/2001	Atsushi Inagaki	1232-4713	5872

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EXAMINER	
MISLEH, JUSTIN P	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/853,311	INAGAKI, ATSUSHI	
	Examiner	Art Unit	
	Justin P. Misleh	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 5, 8, 10 - 17, 20, 22 - 29, 32, and 34 - 36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 5, 8, 10 - 17, 20, 22 - 29, 32, and 34 - 36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 17, 2005 has been entered.

Response to Arguments

2. Applicant's arguments filed August 17, 2005 have been fully considered but they are not persuasive.

3. Applicant argues, "There is nothing in Tanaka, however, including the cited portions by the Examiner that teaches whether the operating frequency of the image sensing device is controlled depending on the ON/OFF state of the image display device (i.e. LCD). It appears that the LCD of the Tanaka's image sensing apparatus is turned ON through the transition between the "a", "b", and "c" modes."

4. The Examiner respectfully disagrees with Applicant's position. In fact, Tanaka discloses the exact opposite of what Applicant alleges. First, in column 8 (lines 46 – 48), Tanaka describes the image signals acquired in the "b" mode and correspondingly recites, "The signals acquired here are used only for the optics-oriented functions and thus irrelevant to the quality of images." *(emphasis added)* Thus, Tanaka at least indicates that the LCD is not required and not

used in the "b" mode. Second, in column 8 (lines 57 – 60), Tanaka describes recording the image signals in the "c" mode and correspondingly recites, "After storage of the pick-up image data is completed, the electronic still camera again returns to its monitoring state." *(emphasis added)* Thus, Tanaka at least indicates that the LCD is not required and not used in the "c" mode.

Claim Objections

5. **Claim 20** is objected to under 37 CFR 1.75 as being a substantial duplicate of **Claim 22**.

The two claims are duplicates because their content is identical. For additional details, see MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 1 – 5, 8, 10 – 17, 20, 22 – 29, 32, and 34 - 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Tanaka et al.

For the following rejections, please refer, in Saito, to the following: figures 1 – 4, 6, and 7 and columns 3 (lines 37 – 56), 4 (lines 23 – 36), 5 (lines 49 – 67), 6 (lines 1 – 22 and 61 – 67), 7 (lines 1 – 8, 23 – 33, 66, and 67), 8 (lines 1 – 23), 10 (lines 12 – 15), 11 (lines 14 – 27), 12 (lines 42 – 49 and 60 – 66), 13 (lines 28 – 35 and 45 – 49), 14 (lines 26 – 33, 66, and 67), and 15 (lines 1 – 13, 27 – 33, and 42 – 53).

8. For **Claim 1**, Saito discloses, at least, two selectable camera modes of operation that include: a record mode and a movie mode. The record mode is configured to capture an image (In CCD 10), perform basic necessary image signal processing (In Image Signal Processing 12), perform image compression (In Compression/Expansion 16), and record the compressed image data in the recording medium (20; by means of Record/Reproduction 18), all over the CPU bus (14). The movie mode is configured to capture an image (In CCD 10), perform basic necessary image signal processing (In Image Signal Processing 12), and perform basic reproduction signal processing (In Reproduction Signal Processing 24) so as to continuously provide image data to appear on the monitor (26), all over the image bus (22). According to the user's mode selection, as shown in figure 2, a Bus Switching Circuit (212) in the Image Signal Processing (12) is activated so as to output the image data to either the CPU bus (14) or the image bus (22). The Bus Switching Circuit (212) operates according to the table in figure 4. When a record mode is selected, the Bus Switching Circuit (212) turns on a buffer allowing image data to access onto the CPU bus (14). When a movie mode is selected, the Bus Switching Circuit (212) turns the buffer to a hi-impedance state preventing image data from accessing the CPU bus (14) and allowing image data to access the image bus (22). Since when the movie mode is selected, image bus (22) access is allowed, the main controller (30), which is directly connected to the CPU bus (14), becomes idle (see column 6, lines 18 – 22). Thus, according to Saito it is possible to reduce the amount of information to be transferred via the CPU bus (14) during real-time movie mode operation; thereby allowing compression, image communication, and other processing using the general memory (36) connected to the CPU bus (14) to be performed without muting a picture appearing on the monitor (26). In summary, Saito discloses (column

15, lines 42 – 53), in the movie mode, image data are transferred from the image signal processing (12) to the image bus (22) and to the reproduction signal processing (24); therefore, "it is possible lower the operation clock frequency assigned to the main controller (30) or to interrupt the operation of the other circuitry, i.e., to control each section of the camera (1) to the sleep state or a stand-by or idle status"; thereby successfully reducing the power consumption of the entire camera (1).

In regards to the claim language, Saito discloses an image sensing apparatus (1), comprising:

an image sensor (10) configured to sense an image of a subject to obtain a sensed image;

an operating frequency setting device (Bus Switching Circuit 212 and main controller 30; see column 8, lines 1 – 12) configured to set an operating frequency of said image sensing apparatus to at least one of a first operating frequency (The first operating frequency corresponds to the operating frequency of the main controller 30 in any mode of play mode and record mode, wherein the main controller 30 and CPU bus 14 are in an active state, as exemplarily shown in figure 7) or a second operating frequency different from said first operating frequency (The second operating frequency corresponds to the operating frequency of the main controller 30 in the movie mode, wherein the main controller 30 and the CPU bus 14 are in an idle state, as shown in figure 6);

a display unit (26) configured to display the sensed image (movie mode), said display unit (26) being capable of display operations at any of said first or second operating frequencies (real-time movie mode) set by said operating frequency setting device (The image bus 22, as explained above, is operationally independent from the CPU bus 14. Saito discloses, two

situations in a movie mode: the first situation is when the main controller 30 and CPU bus 14 are in an idle state, corresponding to the second operating frequency, and the second situation is when the main controller 30 and CPU bus 14 are in an active state, corresponding to the first operating frequency; wherein image data is continuously displayed in both situations; see column 15, lines 1 – 13 and 27 – 33);

a sensing device (30) configured to sense an operation causing pre-processing ("shutter release button halfway") or photographic processing ("button is fully pressed"); and

a storage device (36);

wherein said operating frequency setting device sets the operating frequency of said image sensing apparatus based on whether said sensing device senses the operation or not (see column 13, lines 28 –35).

Although, while Saito teaches setting the operating frequency of said image sensing apparatus based on whether said sensing device senses the operation or not and a storage device; Saito does not disclose: **A)** wherein said operating frequency setting device sets the operating frequency of said image sensing apparatus based on whether said display unit is turned on or not and **B)** wherein the storage device stores a flag indicating an ON/OFF setting of the display unit such that the operation may be controlled according to the stored flag.

With regard to **item A)** and in analogous art, Tanaka et al. also disclose an image sensing apparatus with an operating frequency setting device. More specifically, Tanaka et al. disclose, as shown in figures 7, 8A, and 8B and as stated in column 8 (line 4) – column 9 (line 32), wherein the image sensing device with an operating frequency setting device for setting the operating frequency in response to driving mode of the image sensing apparatus. Tanaka et al.

teach that driving mode "a" is an image monitoring mode for displaying a preview image on the LCD 107 wherein the operating frequency is "divided" to "1/m" (corresponding to the claimed "display unit is turned on") and driving modes "b and c" are image adjustment and recording modes wherein images are not displayed on the LCD (see column 8, lines 57 – 60) and the operating frequency is not "divided" (see column 8, lines 37 – 42; corresponding to the claimed "display unit is turned off"). Thus, Tanaka et al. teach wherein said operating frequency setting device sets the operating frequency of said image sensing apparatus based on whether said display unit is turned on or not.

As stated in column 2 (lines 1 – 5) of Tanaka et al., at the time the invention was made, it would have been obvious to one with ordinary skill in the to have included wherein said operating frequency setting device sets the operating frequency of said image sensing apparatus based on whether said display unit is turned on or not, as taught by Tanaka et al., in the image sensing apparatus, disclosed by Saito, for the advantage of reducing the power dissipation of the image sensing apparatus without affecting picture motions on a monitor display or the quality of picked-up images.

Also, with regard to **item B)**, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of determining the operation of an image sensing apparatus based upon stored flags representing operating characteristics of the image sensing apparatus are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have set the operation frequency of said image sensing apparatus based upon a stored flag for the advantage of reducing the amount of lost information in case of accidental power-off of the image sensing apparatus.

9. For **Claim 13**, the claim language requires a method for controlling the image sensing apparatus required by Claim 1. The rejection of Claim 1 fully encompasses the apparatus aspect and method aspect required by both claims. For details regarding Claim 13, please see the rejection of Claim 1. The claims depending from Claim 13 follow suit, as described below.

10. For **Claim 25**, the claim language requires a storage medium that stores a control program comprising code for controlling the image sensing apparatus required by Claim 1. Saito does not actually describe a storage medium and control program details; however, in column 6 (lines 61 – 67) and column 7 (lines 1 – 8), Saito gives evidence that a storage medium and control program details inherently exist. In other words, the camera (1), which is controlled by a RISC processor, is inoperable without a storage medium that stores a control program comprising code for controlling the camera. The rejection of Claim 1 fully encompasses the apparatus aspect and coded method aspect required by both claims. For details regarding Claim 25, please see the rejection of Claim 1. The claims depending from Claim 25 follow suit, as described below.

11. As for **Claims 2, 14, and 26**, Saito discloses, as stated in columns 12 (lines 42 – 49) and column 13 (lines 18 – 35), wherein said second operating frequency (main controller 30 state during movie mode is idle) is lower than said first operating frequency (main controller state during record mode is active).

Furthermore, Tanaka et al. teach that in the image monitoring driving mode "a", corresponding to when the display unit is turned ON, the operating frequency is "divided" to "1/m" (corresponding to the second lower operating frequency) and that in image adjustment and recording driving modes "b and c", corresponding to when the display unit is turned OFF, the

operating frequency is not "divided" (corresponding to the first higher frequency; see column 8, lines 37 – 42). Thus, Tanaka teaches said operating frequency setting device (main controller 30) sets said first operating (higher) frequency when said display unit is OFF and sets said second operating (lower) frequency when said display ON.

12. As for **Claims 3 and 15**, Saito discloses, as stated in columns 12 (lines 42 – 49) and 13 (lines 28 – 35), wherein said second operating frequency (main controller 30 state during movie mode is idle) is lower than said first operating frequency (main controller state during record mode is active) and said operating frequency setting device (main controller 30) sets said first operating frequency when said sensing device (30) sense the operation.

13. As for **Claim 27**, Saito discloses, as stated in columns 12 (lines 42 – 49) and 13 (lines 28 – 35), wherein said second operating frequency (main controller 30 state during movie mode is idle) is lower than said first operating frequency (main controller state during record mode is active) and said operating frequency setting device (main controller 30) sets said first operating frequency when said sensing device (30) sense the operation.

14. As for **Claims 4, 16, and 28**, Saito discloses, as stated in columns 12 (lines 42 – 49) and 13 (lines 18 – 35), wherein said second operating frequency (main controller 30 state during movie mode is idle) is lower than said first operating frequency (main controller state during record mode is active). Furthermore, Tanaka et al. teach that in the image monitoring driving mode "a", corresponding to when the display unit is turned ON, the operating frequency is "divided" to "1/m" (corresponding to the second lower operating frequency) and that in image adjustment and recording driving modes "b and c", corresponding to when the display unit is turned OFF, the operating frequency is not "divided" (corresponding to the first higher

frequency; see column 8, lines 37 – 42). Thus, Tanaka teaches said operating frequency setting device (main controller 30) sets said first operating (higher) frequency when said display unit is OFF and sets said second operating (lower) frequency when said display ON.

Finally, Saito discloses, as stated in columns 12 (lines 42 – 49), 13 (lines 28 – 35), 15 (lines 1 – 13 and 43 – 53), that when the "shutter release button" is not pressed halfway the camera (1) is in an idling or sleep state status in which the operation clock frequency is lowered to save battery power ("second operating frequency") and upon halfway depression of the "shutter release button" the camera (1) cancels the sleep state wherein the operation frequency is not lowered (first operation frequency). Thus, Saito discloses setting said first operation frequency when said sensing device senses the operation during said second operating frequency is set.

15. As for **Claims 5, 17, and 29**, Saito discloses, as stated in column 13 (lines 18 – 35), wherein the operating frequency setting device continues the setting of said first operating frequency during the pre-processing (shutter release button is pressed halfway) and the photographic processing (button is fully pressed).

16. As for **Claims 8 and 32**, Saito discloses wherein said display unit (26) is capable of displaying the sensed image obtained from said image sensor (10) at any of said first or second operating frequency (real-time movie mode).

The image bus 22, as explained above, is operationally independent from the CPU bus 14. Saito discloses, two situations in a movie mode: the first situation is when the main controller 30 and CPU bus 14 are in an idle state, corresponding to the second operating

frequency, and the second situation is when the main controller 30 and CPU bus 14 are in an active state, corresponding to the first operating frequency; wherein image data is continuously displayed in both situations; see column 15 (lines 1 – 13 and 27 – 33).

17. As for **Claims 10, 20, 22, and 34**, Saito discloses, as stated in column 13 (lines 28 – 35), wherein the operating is a halfway operation to a shutter button.

18. As for **Claims 11, 23, and 35**, Saito discloses, as stated in column 7 (lines 47 – 65), wherein the pre-processing includes a focus adjustment (TTL-AF).

19. As for **Claims 12, 24, and 36**, Saito discloses, as stated in column 7 (lines 47 – 65), wherein the pre-processing includes a metering operation (TTL-AE).

Conclusion

20. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Ngoc Yen Vu can be reached on 571.272.7320. The fax phone number for the organization where this application or proceeding is assigned is 571.273.3000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
December 9, 2005

NGOC-YEN VU
PRIMARY EXAMINER